DANIEL G. COOPER
(Cal. SBN 153576; cleanwater@sfo.com)
LAWYERS FOR CLEAN WATER, INC.
1004-A O'Reilly Avenue
San Francisco, CA 94129
Telephone: (415) 440-6520
Facsimile: (415) 440-4155

JOSEPH W. COTCHETT
(Cal. SBN 36324; jcotchett@cpmlegal.com)
BARBARA L. LYONS
(Cal. SBN 173548; blyons@cpmlegal.com)
JOSEPH C. WILSON V
(Cal. SBN 249027; jwilson@cpmlegal.com)
COTCHETT, PITRE & McCARTHY
840 Malcolm Road, Suite 200
Burlingame, CA 94010
Telephone: (650) 697-6000
Facsimile: (650) 697-0577

ROBERT F. KENNEDY, JR.
(*Pro Hac Vice Pending*; mpostman@law.pace.edu)
KEVIN J. MADONNA
(*Pro Hac Vice Pending*; kmadonna@kennedymadonna.com)
KENNEDY & MADONNA, LLP
48 Dewitt Mills Road
Hurley, NY 12443
Telephone: (845) 331-7514
Facsimile: (845) 331-7578

Attorneys for Plaintiffs

E-filing

ORIGINAL
FILED
DEC 6 2007
RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

CV 07 6199 WHA

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

KLAMATH RIVERKEEPER, a nonprofit public benefit corporation; **HOWARD McCONNELL**; **LEAF G. HILLMAN**; **ROBERT ATTERERY**; and **BLYTHE REIS**; Plaintiffs, v. **PACIFICORP, INC.**, an Oregon Corporation; Defendants.	Case No. **COMPLAINT FOR VIOLATION OF THE FEDERAL SOLID WASTE DISPOSAL ACT** **42 U.S.C. §§ 6901 *et seq.*** **JURY TRIAL DEMANDED**

TABLE OF CONTENTS

Plaintiffs, by their attorneys Lawyers for Clean Water, Inc.; Cotchett, Pitre & McCarthy; and Kennedy & Madonna, LLP, allege as follows on information and belief, except as to those allegations that pertain to Plaintiffs individually, which matters Plaintiffs allege on personal knowledge:

I.

INTRODUCTION

1. This case concerns the pollution and contamination of one of the greatest rivers in California, the Klamath River. The Klamath River is one of California's largest and longest rivers, and the Lower Klamath River has been part of the National Wild and Scenic Rivers System for over 25 years. The impairment of the Klamath River, because of elevated levels of toxins present in the Klamath River, reduces the use and enjoyment of the Klamath River by the Klamath Riverkeeper members, Native American tribe members, and the general public.

2. The Klamath watershed in Northern California is the historic home of the Yurok and Karuk tribes. For hundreds of years, the Klamath River has been integral to the tribe members' cultural, religious, economic and family lives. Generations of Yurok and Karuk children have played next to and swum in the Klamath River, and their parent's fish and practice religious rites in the Klamath River. Many of these families rely on sales of salmon for their economic survival.

3. The Klamath River has independent economic, scientific, scenic, and recreational value to others, as well. California's commercial fishing economy relies heavily on the Pacific salmon catch, as does the Klamath River sport-fishing industry. Recreational uses such as whitewater rafting and kayaking have made the Klamath River a popular destination for river sports enthusiasts, as well. Others enjoy the beauty of this California scenic treasure when hiking, birdwatching, and observing wildlife.

4. The Klamath River has always been an important fish spawning passage, once supporting the third largest salmon runs on the West Coast. Under federal law, the Yurok tribe's people have the right to sufficient salmon to support a modest standard of living. It is as

true today as it was a century ago, when our United States Supreme Court stated about the right of indigenous people to fish:

The right to resort to the fishing places [is] not much less necessary to [their] existence...than the atmosphere they breathe[.]

United States v. Winans, 198 U.S. 371, 381, 25 S.Ct. 662, 49 L.Ed. 1089 (1905).

5. Over the past eight decades, dams have been erected on the Klamath River. Today, defendant PacifiCorp, Inc. ("PacifiCorp") owns and operates those dams. Attached hereto as Exhibit A is a map by the United States Department of the Interior - Bureau of Reclamation showing the locations of the dams on the Klamath River.

6. The Iron Gate and Copco Dams harm the Klamath River environment by disrupting water flows and raising water temperatures, which results in the growth of a toxic blue-green algae called *Microcystis aeruginosa*, a species of cyanobacteria. Toxins released from the algae's blooms have significantly impacted members of Riverkeeper and Yurok and Karuk tribe members. The toxins cause physical harm to Riverkeeper and tribe members. Further, the toxins limit Riverkeeper's members', tribe members', and commercial fishermen's catch, thereby jeopardizing their economic survival. The same toxic blooms make the water unsightly and unsafe, deterring river recreation and the associated Northern California businesses.

7. It has now been documented that the pollution and contamination have their origins in reservoirs that sit above PacifiCorp's Iron Gate and Copco dams ("Iron Gate and Copco Reservoirs" or "Reservoirs"). PacifiCorp's operation of the dams raises water temperatures in the Reservoirs well above natural levels, which promotes algae growth, so much so that a layer of toxic scum now covers the Reservoirs annually from July through October.

8. The algae's effects go far beyond diminished aesthetic value; it poses a threat to the fishery and human health, because it generates a potent liver toxin and tumor promoter known as a microcystin.

9. PacifiCorp's handling, storage, and disposal of solid waste at the Iron Gate and Copco dams and the Reservoirs expose Riverkeeper's members and the public to toxins, reduces Plaintiffs' property values, and severely impacts fish stocks in the Klamath River, its tributaries, and the California and Oregon coasts. As a result, some of Plaintiffs' customers, tribe members' and Riverkeeper's members' use and enjoyment of the Klamath River has been reduced and, in some cases, eliminated, causing damages to each.

10. PacifiCorp's operations of the Iron Gate and Copco dams violates the Federal Solid Waste Disposal Act, 42 U.S.C. § 6901 *et seq.* (also known as the "Resource Conservation and Recovery Act" or "RCRA"), because the *Microcystis aeruginosa*, and its associated toxin, microcystin, are generated by, and handled, stored and disposed from the Iron Gate and Copco Dams. This algae and the associated toxins are solid waste and PacifiCorp's improper management of that waste presents an imminent and substantial endangerment to health and the environment.

II.

JURISDICTION AND VENUE

11. Venue is proper in the Northern District of California pursuant to Section 7002(a)(1) of RCRA, 42 U.S.C. § 6972(a)(1), because some of the endangerment alleged in this Complaint is located within this judicial district.

12. Section 7002(b)(2)(A) of RCRA requires a citizen to issue a Notice Letter ninety (90) days before the initiation of a civil action under section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(b)(2)(A). Notice was given to PacifiCorp as the owner and/or operator ("Owner/Operator") of the Iron Gate and Copco dams. The Notice Letter explained that PacifiCorp has contributed to the past or present handling, storage, treatment, transportation, or disposal of any solid and/or hazardous waste, which may present an imminent and substantial endangerment to health or the environment. 40 C.F.R. § 254.2(a)(1).

13. A copy of the Notice Letter was sent to the Administrator of the United States Environmental Protection Agency ("EPA"), the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, and the chief administrative officer of

the solid waste management agency for the State in which the violation is alleged to have occurred. *Id.* Notice was also sent to the registered agent of PacifiCorp. *Id.*

14. The requisite ninety (90) day notice period has expired and Plaintiffs may now file suit against PacifiCorp for violations of RCRA. 42 U.S.C. § 6972(b)(2)(A).

III.

THE PARTIES

A. Plaintiffs.

1. Klamath Riverkeeper

15. Klamath Riverkeeper ("Riverkeeper") is a nonprofit public benefit corporation organized under the laws of the State of California with its main office in Orleans, California It operates the Klamath Riverkeeper project, whose mission is to preserve, protect, and defend the environment, wildlife, and natural resources of the Klamath River.

16. Riverkeeper's members recreate throughout the Klamath River watershed, using the area waterways and riparian lands to fish, sail, boat, kayak, swim, birdwatch, view wildlife, and engage in scientific study, including monitoring activities. The water pollution that results from the Klamath River dams' operations impairs these uses. Thus, the interests of Riverkeeper's members have been, are being, and will continue to be adversely affected and irreparably harmed by the conduct alleged herein. The relief sought herein will redress the harm to Riverkeeper's members caused by PacifiCorp's activities.

2. Howard McConnell

17. Howard McConnell is a Yurok tribal elder and a former chairman of the Yurok Tribal Council. He resides in Hoopa, California and is a member of Riverkeeper. Mr. McConnell is a Yurok fishermen and has fished the Klamath River for salmon, steelhead, sturgeon, and lamprey eel from the Klamath River all of his life. His federal fishing rights derive from those Congress has given to the Yurok tribe. Mr. McConnell's livelihood is threatened by the declining fishery, and he is exposed to water pollutants when fishing the Klamath River.

3. Leaf G. Hillman

18. Leaf G. Hillman is a member of the Karuk Tribe and is a lifelong resident of Orleans, California. Mr. Hillman is currently the Vice Chairman of the Karuk Tribal Council and is a member of Riverkeeper. In addition, Mr. Hillman is a world renewal priest, having inherited the responsibility to preside over and organize a series of traditional Karuk religious ceremonies known as Pikiawish. Translated into English, Pikiawish means, "to fix the world". Pikiawish ceremonies are performed by world renewal priests in the Klamath River during late summer or early fall as dictated by a lunar calendar. When he conducts and participates in Pikiawish ceremonies, Mr. Hillman is immersed in water that has been polluted with algal microcystin because of PacifiCorp's activities. The hazard to Mr. Hillman's health is particularly extreme, in that the Pikiawish ceremony coincides with or closely follows peak algae blooms in the Iron Gate and Copco Reservoirs, when pollution of the Klamath River is at its worst.

4. Robert Attebery

19. Robert Attebery is a member of the Yurok tribe and resides in Happy Camp, California. In 2006, Mr. Attebery served as a world renewal priest during Pikiawish. In the course of the ceremony, priests bath ritualistically in the Klamath River several times a day. Therefore, world renewal priests are especially susceptible to exposure to water pollutants. Several days into last year's Pikiawish ceremony, Mr. Attebery became ill and was forced to end his service as priest prematurely.

5. Blythe Reis

20. Blythe Reis resides in Orleans, California, where she co-owns and operates the Sandy Bar Ranch. Ms. Reis is a member of Riverkeeper. The Sandy Bar Ranch provides cabin rentals for fishermen, kayakers, rafters, and other visitors to the area. Ms. Reis's customers are exposed to water pollutants through various forms of river recreation. PacifiCorp's pollution of the Klamath River threatens Ms. Reis's livelihood, as it deters recreational uses of the river.

B. Defendant PacifiCorp, Inc.

21. PacifiCorp is a corporation organized under the laws of the State of Oregon. Among other business activities, PacifiCorp operates dams on the Klamath River in California and Oregon. PacifiCorp is headquartered in Portland, Oregon. PacifiCorp has over 1.6 million retail electricity customers, 43,777 of whom are in California.

22. In March of 2006, PacifiCorp was acquired by MidAmerican Energy Holdings Company. MidAmerican Energy has operating revenues of $10.3 Billion annually and is owned in whole or in part by Berkshire Hathaway.

IV.

STATUTORY BACKGROUND

The Resource Conservation and Recovery Act

23. RCRA regulates generators of hazardous waste pursuant to the regulations implementing § 3002 of RCRA, 42 U.S.C. § 6922, codified at 40 C.F.R. Part 262 and pursuant to the regulations implementing the California Hazardous Waste Control Act, California Health and Safety Code, 25244, *et seq.* at 22 C.C.R. §§ 66262.1-66262.89.

24. RCRA requires each facility that treats, stores, or disposes of its generated solid waste to test such waste to determine whether the waste is either a Listed Hazardous Waste or a Characteristic Hazardous Waste (42 U.S.C. § 6921; 40 C.F.R. § 262.11; 22 California Code of Regulations ("C.C.R."). § 66262.11).

25. Section 3005 of RCRA, 42 U.S.C. § 6925, requires every facility that stores, treats, or disposes of hazardous waste to obtain a permit for such activities. Hazardous waste includes any of the "Listed Hazardous Wastes" specified in 40 C.F.R. Part 261 and in 22 C.C.R. §§ 66261.1-66261.126 , as well as any waste which fits the description of a "Characteristic Hazardous Waste" as defined at 40 C.F.R. Part 261 and at 22 C.C.R. §§ 66261.21-66261.24.

26. RCRA defines "solid waste" in part as "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting

from industrial, commercial, mining, and agricultural operations, and from community activities." 42 U.S.C. § 6903(27).

27. Disposal is defined as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters." 42 U.S.C. § 6903(3).

28. Section 3004 of RCRA, 42 U.S.C. § 6924, requires owners and operators of hazardous waste treatment, storage, and disposal facilities to follow record-keeping, reporting, and other manifest maintenance standards. These requirements are described at 40 C.F.R. Part 264 and 22 C.C.R. §§ 66264.1-66264.1102.

29. Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972 (a)(1)(B), permits citizen enforcement actions for injunctive relief against any "person" who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.

V.

STATEMENT OF FACTS

A. Blue-Green Algae *Microcystis aeruginosa* and The Associated Toxin Microcystin Discharged From PacifiCorp's Operations Are Toxic.

30. Concern over habitat destruction and disruption of native fisheries from dams on the vast majority of the rivers of the west coast of the United States has steadily increased over several decades. Another, even more insidious impact of these dams and the Reservoirs, such as the Iron Gate and Copco Reservoirs, owned and operated by PacifiCorp, results in the growth of toxic, blue-green algae. By damming rivers that are high in nutrients, impounding the waters in reservoirs, then warming those waters in a quiescent environment, dam operators like PacifiCorp create a perfect environment for the growth and proliferation of blue-green

algae, also known as cyanobacteria. *Microcystis aeruginosa* ("*M. aeruginosa*") is one such cyanobacteria.

31. *M. aeruginosa* proliferates in the Iron Gate and Copco dams, and is at peak bloom annually in July and August. The algal blooms generate a microcystin that is both a potent liver toxin and a tumor promoter.

32. In 2006, microcystin levels in the Iron Gate and Copco Reservoirs exceed World Health Organization ("WHO") guidelines for a *moderate* risk of exposure 4,000 times over, and were the highest levels of that toxin ever measured in the United States. Water from these toxic pools flows down the Klamath River and through tribal lands, jeopardizing all downstream uses of the river.

33. The algae degrades water quality, imperiling the Klamath River's salmon, steelhead, sturgeon, and lamprey fisheries. When the algae breaks up, the resulting sediment provides an ideal incubator for worms that host the *C. Shasta* parasite. That parasite has been linked to juvenile salmon die-offs in the Klamath River for each of the past five years.

34. Many genera of cyanobacteria produce a variety of neuorotoxins, liver toxins (hepatotoxins), and other toxins poisonous to both humans and wildlife. While an algae cell remains healthy, toxins will remain within the cell. Under certain growth conditions, healthy algal cells secrete toxins. As the algae cells age, die, or break open (such as occurs when algaecides are applied), the cells release its toxins into the water.

35. When present, *M. aeruginosa* is found on and near the surface of relatively still lakes and reservoirs, appearing as mats of scum and giving the water a green-hue. This blue-green algae produces the potent toxin microcystin. Microcystin is a hepatotoxin, which causes damage to the liver.

36. Microcystins are highly toxic at very low dosages. Exposure to *M. aeruginosa* and microcystin occurs through oral ingestion, aspiration of water into the lungs, inhalation of mist, and skin contact. *See* Stone, David and Bress, William, "Addressing Public Health Risk For Cyanobacteria in Recreational Freshwaters: The Oregon and Vermont Framework," Integrated Envt'l Assess. & Management, Vol. 3, No. 1, p. 139 (2007) ("Stone & Bress") (*See*

Exhibit B). Exposure can result in serious gastrointestinal problems, nausea, vomiting, flu-like symptoms, sore throat, blistering, eye and ear irritations, rashes, visual disturbances, and death through liver failure. *Id.* at p.137. Exposure to toxins can be exacerbated by eager recreational users entering the water shortly after a bloom has dissipated. *Id.* at p. 142. In addition, because the death of the *M. aeruginosa* releases its toxins into the surrounding waters, released toxins will persist after a blue-green algae bloom dissipates. *Id.* at p. 142.

37. Microcystin can accumulate in fish tissue. *Id.* Microcystin has been measured not only in the livers and viscera of exposed fish, but also in their fillets. *Id.* Cooking fish or heating water does not break down microcystins. *Id.* at pp. 139-140.

38. WHO has established several standards for cyanobacterial levels based on various risk levels. WHO has also published a provisional drinking water guideline value of 1 microgram per liter (ìg/l) for microcystin-LR. *See* Chorus, Ingrid & Bartram, Jamie, eds., Toxic Cyanobacteria In Water: A Guide To Their Public Health Consequences, Monitoring And Management, § 5.2.2 (World Health Organization 1999) ("WHO Guide") (*See* Exhibit C). WHO has established a low risk level of 20,000 cyanobacterial cells per milliliter (cells/ml). *Id.* At that level, data indicates that exposed individuals may still experience skin irritation and gastrointestinal illness. WHO's moderate probability of health effect threshold is set at 100,000 cyanobacterial cells/ml. *Id.* According to WHO, more long-term illnesses could result from exposure at this level, in addition to skin irritation and gastrointestinal illness. WHO has published a tolerable daily intake ("TDI") value of .04 ìg kg bw-1 corresponding to the amount of potentially harmful substances that can be consumed daily over a lifetime with negligible risk of adverse health effects. *Id.*

39. WHO also sets a high risk level when algal scums are present, which can increase cell densities a 1000 to 1,000,000 fold and where whole body exposure to or ingestion or aspiration of any cyanobacteria scum may occur. *Id.* When a person or animal is exposed to cyanobacterial scum, there is a potential for acute poisoning and even death. "It has been calculated that a child playing in a Microcystis scum for a protracted period and ingesting a significant volume could receive a lethal exposure...." *Id.*

40. The State of Oregon has employed a guidance level for *M. aeruginosa* and microcystin of 40,000 cells/ml and 8 ìg/l, respectively. *See* Stone & Bress at p. 142 (*See* Exhibit B). Levels of *M. aeruginosa* and microcystin measured in Iron Gate and Copco reservoirs during 2005 and 2006 greatly exceed the health-based standards published by WHO and the State of Oregon.

B. PacifiCorp's Dam Operations Result In Some Of The Highest Levels Of Toxic Blue Green Algae Blooms And Microcystin Recorded In A Public Waterbody.

41. For at least the last six years, PacifiCorp has been aware of excessive algal blooms occurring behind the Iron Gate and Copco Reservoirs, particularly during the summer and early fall months. *See* Kann, Jacob, "*Microcystis aeruginosa* Occurrence in the Klamath River System of Southern Oregon and Northern California," p. 12 (Feb. 3, 2006) ("Kann 2006") (*See* Exhibit D); *see* Letter from Russ J. Kanz, Environmental Specialist, State Water Resources Control Board to Magalie R. Salas, Federal Energy Regulatory Commission, at p. 11 (Apr. 22, 2004) (noting the presence of "offensive algal blooms and associated odors" in the reservoirs) (*See* Exhibit E); and *see* Karuk Tribe of California Submission to FERC, Recommended Terms and Conditions, Klamath Hydroelectric Project at p. 7 (March 28, 2006) ("Karuk Terms") (*See* Exhibit F).

42. Data collected by PacifiCorp and the Karuk Tribe Department of Natural Resources over the last six years demonstrates the occurrence of dangerous *M. aeruginosa* blooms in the Iron Gate and Copco Reservoirs despite the absence of detectable levels of that algae in Klamath River water samples above Copco Reservoir. *See* Kann 2006 at p.12 ("Copco/Irongate reservoir system showed significant prevalence of [*M. aeruginosa*], especially relative to Klamath River stations directly above the reservoirs"); *Id.* at p. 15 ("both the PacifiCorp and Karuk/SWRB data clearly indicate large increases in [*M. aeruginosa*] in the reservoirs relative to the Klamath River upstream") (*See* Exhibit D).

43. Analyses of a water sample taken from Copco Reservoir by the Klamath Basin Tribal Water Quality Workgroup in September 2004 confirmed the presence of *M. aeruginosa* and its accompanying toxin microcystin in that reservoir. Subsequently, in 2005 and 2006, the

Karuk Tribe Department of Natural Resources carried out comprehensive monitoring of both reservoirs for the presence of cyanobacteria and microcystin, again finding very high levels of *M. aeruginosa* within the reservoirs and no *M. aeruginosa* and very low or no levels of microcystin directly above the reservoirs.

44. PacifiCorp conducted algae sampling in Iron Gate and Copco Reservoirs from 2001 to 2004. *See* Kann 2006 at p. 9 (Table 2) (*See* Exhibit D). Almost all of PacifiCorp's samples were taken at various depths, including an integrated sample extending down to 10 meters or a grab sample at various depths ranging from 0.5 meters to 8 meters. *Id.* at p.12. *See also* Kann, Jacob and Asarian, Eli, "Technical Memorandum: Longitudinal Analysis of Klamath River Phytoplankton Data 2001-2004," at p. 1 (Sept. 2006) ("Kann & Asarian 2006") (*See* Exhibit G).

45. Because *M. aeruginosa* floats and concentrates near the surface of waterbodies, PacifiCorp's data, taken at depths below the surface, underestimates the concentrations of algae at the surface of the reservoirs where water contact recreation would occur. *See* Kann & Asarian 2006 at p. 16 (*See* Exhibit G); *see also* Kann, Jacob, "Partial Seasonal Summary of 2006 Toxic *Microcystis aeruginosa* Trends in Iron Gate and Copco Reservoirs and the Klamath River, CA," p. 12 (Nov. 2006) ("Kann 2006a") (*See* Exhibit H).

46. Nevertheless, from July through October of the sampling period, 30% of the 13 samples taken by PacifiCorp from Copco Reservoir showed detectable levels of *M. aeruginosa* with 5 of those samples containing greater than 10,000 cell/ml of *M. aeruginosa*. *Id.* at p. 9 (Table 2). Similarly, despite being taken at depth, 29% of the 12 samples taken from Iron Gate reservoir showed the presence of *M. aeruginosa* with two of those samples above 10,000 cell/ml. *Id.* Notably, on the two occasions where PacifiCorp directly sampled the surface of the reservoirs where blooms were present, both contained extremely high levels of *M. aeruginosa*. Specifically, a 2003 sample taken at Copco reservoir contained 18 million cells/ml, or approximately 20,000 colonies per milliliter (colonies/ml), and a 2005 sample contained 6.6 million cells/ml. *Id.* at p. 12.

47. In 2005, the Karuk Tribe Department of Natural Resources took samples from various locations in the two reservoirs. *See* Kann, Jacob and Corum, Susan, "Summary of 2005 Toxic *Microcystis aeruginosa* Trends in Iron Gate and Copco Reservoirs on the Klamath River, CA" at pp. 3-4 (March 2006) ("Kann & Corum 2006") (*See* Exhibit I). The sampling locations were designed to monitor various conditions and key locations within the reservoirs including open water, calm shoreline areas, and some shorelines adjacent to popular boat launch areas and residences. *Id.* Samples were taken bi-weekly beginning in July 2005 and concluding at the beginning of November 2005. *Id.* at p. 3, 7-9 (Table 2).

48. Beginning in July 2005, Dr. Kann and Ms. Corum measured levels of *M. aeruginosa* and microcystin well-above the standards published by WHO and the State of Oregon. Cell counts of *M. aeruginosa* and levels of microcystin increased as the summer progressed, peaking in September at a cell count of 163 million *M. aeruginosa* cells per milliliter and 1994.83 milligrams per liter of microcystin along the western shoreline of Copco Reservoir. Those levels exceeded the WHO moderate risk levels for *M. aeruginosa* and microcystin by 1,630 times and 99.7 times, respectively. *See* Kann & Corum 2006 at p. 8 (Table 2) (*See* Exhibit I).

49. Dr. Kann and Ms. Corum detected high levels of *M. aeruginosa* and microcystin in both reservoirs from July through the end of October 2005. Although those levels exhibited variability both temporally and spatially, levels of *M. aeruginosa* and microcystin at most of the reservoir monitoring stations exceeded WHO's moderate risk levels for the vast majority of days samples were taken from August through October. *Id.* at p. 12.

50. The Karuk Tribe Department of Natural Resources continued water sampling in 2006. Blooms of *M. aeruginosa* were again observed beginning in mid-July. Levels of *M. aeruginosa* and microcystin were extremely high as soon as the blooms appeared. On July 13, 2006, Dr. Kann measured 11 million cells of *M. aeruginosa* per ml and an accompanying microcystin level of 2,286 ìg/l in Copco Reservoir. *See* Kann 2006a at p. 4 (*See* Exhibit H). This level of *M. aeruginosa* is over 100 times the WHO moderate risk level, while the

microcystin concentration was over 300 times greater than the tolerable daily intake level for a 40 pound child. *Id.* at p. 6 (Table 2).

51. Similar levels of *M. aeruginosa* were detected throughout the summer and into October of 2006. On July 27, 2006, Dr. Kann detected a maximum level of *M. aeruginosa* of 393,395,000 cells/ml, which is 3,934 times the WHO moderate health risk. *Id.*

52. Microcystin results were still pending at the time of Dr. Kann's November 2006 report. However, the data for the summer months also showed consistently high levels of the toxin, with a maximum concentration of 12,176 ìg/l measured on August 8, 2006. That concentration was 1,682 times the TDI level for posting adopted by the State of Oregon and the Klamath Basin Blue-Green Algae Working Group. *Id.* The levels of microcystin measured in July and August 2006 were in fact the highest levels ever recorded in the two reservoirs and "among the highest recorded in the world." *Id.* at p. 5.

53. There can be no dispute about the causal connection of PacifiCorp's operations to the toxic pollution in the Lower Klamath River.

54. Although showing extremely high levels of *M. aeruginosa* and microcystin within the two reservoirs in 2005 and 2006, Bureau of Reclamation's sampling of Klamath River waters released from Upper Klamath Lake, as well as Dr. Kann's and Ms. Corum's sampling from just above Copco Reservoir in fact show very low levels of the algae and associated toxin.

55. Indeed, in 2005, no *M. aeruginosa* was detected in any of the samples of Klamath River water flowing into Copco Reservoir. *See* Kann & Corum 2006 at p. 13 (*See* Exhibit I).

56. A similar pattern of no detectable levels of *M. aeruginosa* also was observed in 2006. Microcystin was either not detected or present at very low levels. *See* Kann 2006a at pp. 6-8 (Table 2) ("KRAC" *i.e.* "Klamath River Above Copco" monitoring station; some microcystin data for September and October was pending at time of report) (*See* Exhibit H), *Id.* at pp. 2-13.

57. Likewise, *M. aeruginosa* was detected in only two of seventeen samples PacifiCorp itself collected above Copco Reservoir during the months of July through October

and the years 2001 through 2004. *See* Kann 2006 at p. 12 (*See* Exhibit D). The highest level detected by PacifiCorp during that period was 30 colonies/ml. *Id.*

58. By contrast, in 2005 Dr. Kann and Ms. Corum measured levels of *M. aeruginosa* in five of seven samples taken below Iron Gate Dam (that is, after the Klamath River waters passed through the Iron Gate and Copco Reservoirs), detecting a high of 42,577 cells/ml of *M. aeruginosa* on September 8, 2005. *See* Kann & Corum 2006 at pp. 7-9 (Table 2) (*See* Exhibit I).

59. Data regarding microcystin levels was limited in 2005. *Id.* Nevertheless, with the exception of one very low level of microcystin detected at the outflow from Upper Klamath Lake, no microcystin was detected in samples taken above Copco Reservoir. *Id.* at p.13. Low levels of microcystin were detected just below Iron Gate Dam in late September and early October of 2005. *Id.*

60. Six of nine samples taken below Iron Gate Dam in 2006 showed measurable levels of *M. aeruginosa* , including a high of 35,985 cells/ml discharging to downstream waters from Iron Gate on July 27, 2006. *See* Kann 2006a at p. 6 (Table 2) (*See* Exhibit H). Microcystin also was detected in the 2006 releases from Iron Gate Dam. *Id.* at pp. 6-7.

61. Additional data for Upper Klamath Lake does not show any appreciable amounts of *M. aeruginosa* passed downstream from the waterbody.

62. Dr. Kann analyzed data of *M. aeruginosa* densities collected by the Klamath Tribes from 1990-1997 in Upper Klamath Lake and Agency Lake (upstream of Klamath Lake). *See* Kann 2006 at pp. 2-7 (*See* Exhibit D). During the July through October period for the entire eight years of data collected by the Klamath Tribes, only 13 of 537 samples exceeded one colony of *M. aeruginosa* per milliliter. *Id.* at p. 7. Although *M. aeruginosa* were present in Upper Klamath Lake (detected in about 13% of the Klamath Tribes samples), the levels were almost always below 1 colony/ml. *Id.* Levels leaving Upper Klamath Lake also were very low.

63. PacifiCorp data from 19 samples taken during July 2001 through October 2004 in the Klamath River below Upper Klamath Lake at the mouth of the Link River does not reveal the presence any *M. aeruginosa*. *Id.* at p. 12.

64. These samples make clear that the Iron Gate and Copco Reservoirs are generating massive quantities and concentrations of *M. aeruginosa* and microcystin. Dr. Kann cites to multiple lines of evidence pointing to the role of PacifiCorp's reservoirs in creating ideal habitat conditions for *M. aeruginosa*. *See* Kann 2006 at pp.18-19 (*See* Exhibit D). But for the operation of the two reservoirs, including their stilling and warming of Klamath River waters, little if any of the *M. aeruginosa* and accompanying microcystin detected in and downstream of the reservoirs would be present. *See* Karuk Terms at pp. 7-8 (*See* Exhibit F); *see also* FERC Draft Environmental Impact Statement for the Klamath Hydroelectric Project, Section 3 at p. 3-153 ("DEIS") (*See* Exhibit J).

65. As Dr. Kann concludes, "[t]aken together these data provide compelling evidence that Iron Gate and Copco Reservoirs are providing ideal habitat for MSAE [microcystin]; increasing concentrations dramatically from those upstream, and exporting MSAE to the downstream environment." *See* Kann 2006 at p.19 (*See* Exhibit D).

66. Likewise, Dr. Kann and Mr. Asarian concluded that:

> these analyses show that although the Klamath River receives a large loading of algal biomass (made up largely of the cyanophyte, APHA [aphanizomenon]) from UKL [Upper Klamath Lake], the analyzed data provide clear evidence that Iron Gate and Copco Reservoirs are providing habitat conditions that foster increased overall phytoplankton biovolume comprised largely of nitrogen-fixing cyanophyte species as well as toxigenic [*M. aeruginosa*].

See Kann & Asarian 2006 at p. 34 (*See* Exhibit G); *see also* WHO Guide at p. 14, § 1.1 ("[b]y increasing retention times and surface areas exposed to sunlight, impoundments change the growth conditions for organisms and promote opportunities for cyanobacterial growth and water-bloom formation through modifications to river discharges") (*See* Exhibit C).

///

///

///

C. PacifiCorp's Operation Of The Iron Gate and Copco Dams And Reservoirs Presents An Imminent And Substantial Endangerment To Health And The Environment

67. PacifiCorp, as the Owners/Operators of the Copco Dam and Iron Gate Dam, have been violating and continue to violate RCRA's prohibition on "contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B).

68. The stilling and warming of the Klamath River waters caused by the Iron Gate and Copco Dam impoundments generates the blue-green algae *M. aeruginosa* and microcystin. The *Microcystis aeruginosa*, and its associated toxin, microcystin, are therefore generated by PacifiCorp's operations of the Iron Gate and Copco Dams and the Reservoirs. PacifiCorp further handles and stores that solid waste in the Iron Gate and Copco Dams and the Reservoirs. Finally, that solid waste is disposed of into the Reservoirs and over the Iron Gate and Copco Dams and into the Klamath River. This handling, storage, and disposal of the solid waste at the Iron Gate and Copco Dams and the Reservoirs presents an imminent and substantial endangerment to human health and the environment.

69. The *M. aeruginosa* and associated toxin are "other discarded material" within the definition of "solid waste." It is generated by the dams and hydroelectric process and is abandoned, disposed of, or thrown away, and has no other actual or potential use for PacifiCorp.

1. Endangerment to Human Health

70. The sampling analysis outlined in section B above, indicates that the Iron Gate and Copco Reservoirs are generating and discharging massive quantities and concentrations of *M. aeruginosa* and microcystin exceeding both WHO and State of Oregon standards. These extremely high levels of *M. aeruginosa* and microcystin are present in both the Reservoirs and Klamath River. But for the operation of the two Reservoirs, including their stilling and warming of the Klamath River waters, little if any of the *M. aeruginosa* and accompanying microcystin detected in and downstream of the reservoirs would be in the Reservoirs and the

Klamath River. FERC Draft Environment Impact Statement for the Klamath Hydroelectric Project, Section 3 at 3-153. (*See* Exhibit J).

71. PacifiCorp's introduction, handling, storage, and disposal of *M. aeruginosa* and microcystin into the waters of the Klamath River severely impact those waters annually from July through October. Levels of *M. aeruginosa* and associated microcystin measured in Iron Gate and Copco Reservoirs during that four-month period are consistently well above the moderate risk health standards set by WHO. The levels also consistently exceed TDI levels established by the State of Oregon. At these levels long-term illnesses, skin irritation, gastrointestinal illness, and sub-acute damage to the liver occur. *See* WHO Guide at Table 5.2 (*See* Exhibit C), and Stone & Bress at p. 138 (*See* Exhibit B).

72. PacifiCorp's operations also present an imminent and substantial endangerment as they result in unsightly floating *M. aeruginosa* scum within the two reservoirs, impairing Riverkeeper's members and the public's aesthetic enjoyment of the Klamath River as it passes through PacifiCorp's operations. For those recreating in the reservoirs, this scum presents an especially dangerous condition, as exposure to *M. aeruginosa* and microcystin can be in the millions of cells/ml, *See* Kann 2006a at p. 12 (*See* Exhibit H), potentially leading to acute liver failure. Stone & Bress at p. 137 (*See* Exhibit B).

2. Endangerment to the Environment

73. The levels of *M. aeruginosa* and microcystin detected in the Iron Gate and Copco Reservoirs, and the Klamath River, also indicate potential for toxin accumulation in fish tissue. *See* Kann 2006a at p. 12 (*See* Exhibit H). Several studies indicate that microcystin may be bioaccumulative. *See* Magalaes, V.F., *et al.*, *Microcystins (cyanobacteria hepatotoxins) bioaccumulation in fish and crustaceans from Sepetiba Bay (Brasil, RJ)* Toxicon 42 (2003); Liqiang, X. *et al.*, *Organ distribution and bioaccumulation of microcystins in freshwater fish at different tropic levels from the eutrophic Lake Chaohu, China*, Envt'l Toxicology, Vol. 20, Issue 3 (2005). Indeed, the Yurok Tribe's Environmental and Fisheries Programs has already detected trace levels of microcystin in steelhead livers from fish collected in the lower Klamath River. See Kann 2006a at p. 18 (*See* Exhibit H). Because of their proximity to the *M.*

aeruginosa blooms and residence in waters known to be high in microcystin concentrations, the threat of microcystin accumulation is even greater for rainbow trout, yellow perch, largemouth bass, and other fish caught and eaten by recreational anglers in Iron Gate and Copco Reservoirs and the Klamath River. Not only is bioaccumulation of microcystin produced by *M. aeruginosa* potentially dangerous to fish, but when eaten those fish endanger the health of the consumer.

74. In addition, the levels of *M. aeruginosa* in Iron Gate and Copco Reservoirs indicate *M. aeruginosa* decomposes, which is contributing to the *C. shasta* parasite proliferation in the Klamath River that has caused juvenile salmon die-off the last five years.

75. PacifiCorp's operations also pose a serious threat to pets and wildlife because consumption of *M. aeruginosa* and microcystin can be toxic. According to Siskiyou County public health officer Terry Barber, "[o]ccasionally domestic animals and livestock have been poisoned by toxins in the algae bloom." Siskiyou Daily New, "Health risks of blue-green algae were overstated" (Aug. 26, 2005).

76. Further, PacifiCorp's handling, storage, treatment, and disposal of *M. aeruginosa* and microcystin, a solid and/or hazardous waste, also presents an imminent and substantial endangerment to health or the environment because of the deleterious effects it has on fish and other wildlife within the reservoirs and the Klamath River. Not only is there threat of death to wildlife from acute exposure to *M. aeruginosa*, but fish with bioaccumulated microcystin are consumed by both wildlife and humans. Consuming these fish indicates the potential to expose humans and wildlife to sub-acute or acute levels microcystin.

77. In addition, the breakdown of *M. aeruginosa* presents an imminent and substantial endangerment to health or the environment, as the resulting sediment provides an ideal incubator to the worm host of *C. shasta*, which has been linked to juvenile salmonid die-offs in previous years.

78. PacifiCorp's handling, storage, treatment, and disposal of *M. aeruginosa* and microcystin, a solid and/or hazardous waste, also presents an imminent and substantial

endangerment to health or the environment through the degradation of Plaintiffs' aesthetic enjoyment in Iron Gate and Copco Reservoirs and the Klamath River.

VI.

CLAIM FOR RELIEF

(Violation of the Federal Solid Waste Disposal Act, 42 U.S.C. §§ 6901 *et seq.*)

(By All Plaintiffs Against PacifiCorp)

79. Plaintiffs incorporate herein by this reference each of the foregoing allegations.

80. PacifiCorp's storage, handling, treatment, transportation, or disposal of *Microcystis aeruginosa* presents an imminent and substantial endangerment to health and the environment, and constitutes a violation of RCRA.

81. As detailed above, PacifiCorp is contributing to the handling, storage, treatment, and/or disposal of the *M. aeruginosa* and its associated microcystin, a solid and/or hazardous waste, through: the generation of *M. aeruginosa* and microcystin in its reservoirs and the Klamath River; the handling and storage of *M. aeruginosa* and microcystin in its reservoirs and the Klamath River, and; through the disposal of *M. aeruginosa* and microcystin either over the spillway or through the turbines of its dams into the Klamath River.

82. PacifiCorp's handling, storage, and disposal of *M. aeruginosa* and microcystin are continuous both into the Reservoirs, and into the Klamath River, annually during the months of July through October, when *M. aeruginosa* blooms occur. Thus, PacifiCorp's introduction of the solid waste, *M. aeruginosa* and associated microcystin, to the Klamath River as it passes through its hydroelectric dams and Reservoirs cause or threaten to cause an imminent and substantial endangerment to health and the environment.

83. PacifiCorp has violated and continues to violate RCRA because it continues to handle, store, treat, and dispose of its *M. aeruginosa* and microcystin waste in the manners described herein.

84. PacifiCorp will continue to violate RCRA each day it fails to take measures to prevent the growth of *M. aeruginosa* and associated microcystin, and properly dispose of

M. aeruginosa and microcystin, each of which "may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6972(a)(1)(B).

85. Each and every day that PacifiCorp contributes to or will contribute to the handling, storage, and/or disposal of solid or hazardous waste that may present an imminent and substantial endangerment to health and the environment is a violation of Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B).

86. PacifiCorp will continue to be in violation of RCRA every day that it handles, stores, and/or disposes of solid and/or hazardous waste in a manner that may present an imminent and substantial endangerment to health and the environment.

87. Every day that PacifiCorp fails to correct the situation as required by RCRA is a separate and distinct violation of Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B).

88. An action for injunctive relief under RCRA is authorized by 42 U.S.C. § 6972(a)(1)(B). Continuing commission of the acts and omissions alleged above will irreparably harm Plaintiffs and the citizens of the State of California, for which they have no plain, speedy, or adequate remedy at law.

VII.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs pray for judgment against PacifiCorp as follows:

1. A Court order declaring PacifiCorp to have violated and to be in violation of Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B), for the handling, storage, treatment, transport, and/or disposal of solid or hazardous wastes in a manner which may present an imminent and substantial endangerment to health or the environment pursuant to Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B);

2. A Court order enjoining PacifiCorp from handling, storage, treatment, transport, and disposal of solid or hazardous wastes in a manner which may present an imminent and substantial endangerment to health or the environment pursuant to Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B);

3. A Court order requiring PacifiCorp to remediate all contamination of or other damage to health or the environment resulting from its past and present handling, storage, and disposal of solid or hazardous wastes pursuant to Section 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6972(a)(1)(B);

4. A Court order requiring PacifiCorp to pay civil penalties up to $27,500 per day per violation for violations occurring between February 2, 2001 and March 15, 2004, and pay civil penalties up to $32,500 per day per violation for violations occurring from March 15, 2004 and thereafter pursuant to Sections 3008(a) and (g) and 6972(a) of RCRA, 42 U.S.C. §§ 6928(a) and (g) and 6972(a), and 40 C.F.R. §§ 19.1-19.4; and

5. An award of Plaintiffs' reasonable costs of suit, including attorney, witness, and consultant fees, as permitted by Section 7002(e) of RCRA, 42 U.S.C. § 69729e).

DATED: December 6, 2007

LAWYERS FOR CLEAN WATER, INC., COTCHETT, PITRE & McCARTHY, and KENNEDY & MADONNA, LLP

By: DANIEL G. COOPER
Attorney for Plaintiffs

VIII.

JURY DEMAND

Plaintiffs demand a jury trial on all issues so triable.

DATED: December 6, 2007

LAWYERS FOR CLEAN WATER, INC.

By: DANIEL G. COOPER
Attorneys for Plaintiffs

IX.

DISCLOSURE OF NON-PARTY INTERESTED ENTITIES OR PERSONS

Pursuant to Civil L.R. 3-16, the undersigned certifies that as of this date, other than the named parties, there is no such interest to report.

DATED: December 6, 2007

LAWYERS FOR CLEAN WATER, INC.

By: DANIEL G. COOPER
Attorneys for Plaintiffs

X.

LIST OF EXHIBITS

ExhibitTitle

A. U.S. Department of the Interior, Bureau of Reclamation, Klamath River Basin Map (September 1999)

B. Stone, David and Bress, William "Addressing Public Health Risk For Cyanobacteria in Recreational Freshwaters: The Oregon and Vermont Framework," Integrated Envt'l Assess. & Management, Vol. 3, No. 1 (2007)

C. Chorus, Ingrid & Bartram, Jamie, eds., Toxic Cyanobacteria In Water: A Guide To Their Public Health Consequences, Monitoring And Management (World Health Organization 1999) (Excerpts)

D. Kann, Jacob, "*Microcystis aeruginosa* Occurrence in the Klamath River System of Southern Oregon and Northern California" (Feb. 3, 2006)

E. Letter from Russ J. Kanz, Environmental Specialist, State Water Resources Control Board to Magalie R. Salas, FERC (Apr. 22, 2004)

F. Karuk Tribe of California Submission to FERC, Recommended Terms and Conditions, Klamath Hydroelectric Project (March 28, 2006)

G. Kann, Jacob and Asarian, Eli, "Technical Memorandum: Longitudinal Analysis of Klamath River Phytoplankton Data 2001-2004" (Sept. 2006)

H. Kann, Jacob, "Partial Seasonal Summary of 2006 Toxic *Microcystis aeruginosa* Trends in Iron Gate and Copco Reservoirs and the Klamath River, CA" (Nov. 2006)

I. Kann, Jacob and Corum, Susan, "Summary of 2005 Toxic *Microcystis aeruginosa* Trends in Iron Gate and Copco Reservoirs on the Klamath River, CA" (March 2006)

J. FERC Draft Environmental Impact Statement for the Klamath Hydroelectric Project, Section 3, Environmental Consequences.